

**CLEAN ENERGY FINANCE GUIDE, THIRD EDITION**

**DECEMBER 9, 2010**

## Chapter 11.

# Clean Energy Finance for the Large Commercial Sector: Structures and Strategies

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## A. Commercial Sector Financing Needs and Opportunities

### *Introduction*

Large commercial buildings use a great deal of energy and often offer attractive payback periods for energy efficiency investments. As a result, some programs funded by the American Recovery and Reinvestment Act of 2009 (ARRA) now support energy efficiency or in some cases onsite renewable energy projects in this sector. The clearest incentives in the large commercial sector are usually for investment in buildings where the owner pays the energy bills or the tenant has a lease term that is longer than the payback period on the project. If the owner of the facility is different from the party paying the energy bills (e.g., a tenant), then the incentives to do efficiency projects are “split” between the tenant who pays the energy bills (thus benefiting from the efficiency improvements) and the owner (who pays for the efficiency but receives no direct financial benefit).

In cases where the property owner is also the property occupant, the financial benefits of clean energy investments are clear. They include lower operating costs and increased cash flow, improved services and potentially higher occupancy rates, higher property values, and a contribution to overall building upgrade and system replacement needs. Financing helps property owners pay for the large upfront investment costs of clean energy projects. This chapter provides background and options that are clearly applicable to buildings where the owner and occupant are one and the same, or the property owner pays the energy bill; some of the options presented below may also be applicable to tenant-occupied facilities where the tenants pay the energy bill.

For the purposes of this chapter, and for many ARRA-supported programs, the “large commercial” sector is defined as including commercial buildings such as offices, malls, hotels, and retail stores, along with nonprofit facilities (private nonprofit hospitals, schools, higher education, YMCAs, museums, etc.). Some programs also include industrial projects under their large commercial definition. Following the general discussion below, Sections B and C present several financing structures and related uses of ARRA funds that are being developed to finance large commercial sector building projects for clean energy improvements.

### *Rationale for Promoting Clean Energy Finance in the Large Commercial Sector*

The large commercial buildings sector offers a good target for government-supported clean energy financing programs. Project economics are typically quite strong, with simple payback periods in the 3- to 5-year range, compared with paybacks of 7 to 12+ years in the residential sector. Energy savings and carbon emissions reductions are commensurately higher than in the residential sector as well. ARRA-supported local government energy efficiency (EE) and renewable energy (RE) finance programs can achieve a range of public objectives: create jobs, promote investment that improves local properties and economies, and reduce greenhouse gas emissions

### *Financing Gaps and Barriers*

Commercial real estate is generally facing restricted access to credit due to the recent financial crisis that is still unfolding in the sector. Real estate values are down. Buildings are often owned by special purpose entities whose balance sheets may not sustain additional borrowing. Some owners face restrictive covenants from first mortgage holders. Thus, financing gaps exist in the commercial buildings market that warrant public policy intervention. ARRA-supported local government EE/RE financing programs can help fill those gaps and demonstrate sustainable, scalable new financing structures.

### ***Financing Structures***

Several financing mechanisms are being developed and tested to finance large commercial sector projects supported by ARRA funds. They include the following, which are described more fully in Section B:

- **ESCO Project Financing**, with various types of Energy Service Agreements, which can include loans or leases direct to property owners.
- **Tax-Exempt Bond Financing**, which funds projects directly for eligible nonprofit and industrial facilities.

Commercial property-assessed clean energy (PACE) financing structures, where financing payments are collected with the property tax and secured by a tax lien, can also apply to large commercial building projects. PACE financing is described in Chapter 13.

Developing and marketing financing programs that aggregate many projects together is particularly important to achieve scale in the large commercial market. Successful programs require state and local governments to partner both with the financial institutions providing the financing as well as with other market actors—EE companies, ESCOs, utilities, end-user associations, etc.—that can market the financing and related products while selling and developing projects for investment.

## **B. Financing Structures**

### ***ESCO Project Financing***

An Energy Service Company (ESCO) is a business that develops, engineers, and installs projects designed to reduce the energy usage and maintenance costs for facilities, equipment, and infrastructure in a variety of end-user sectors. An ESCO often provides operations services, monitors savings, and assumes certain performance warranties and risks for its projects. ESCOs use a range of business models and contract structures. ESCOs, and the financial institutions providing ESCO finance, could potentially be good finance aggregation partners for government programs targeting EE projects in the commercial buildings sector. A number of ESCOs have strong interest and sales potential in the commercial sector and are looking for financing solutions in that sector.

ESCOs are a well-established industry.<sup>1</sup> Facilities owned by municipalities, universities and colleges, schools, and hospitals (the “MUSH” market) and the federal government are the market segments most successfully penetrated by ESCOs to date. Institutions in those markets typically have stable energy loads and generally good credit; they also have well-developed procurement methods. Further, some state governments already operate energy performance

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<sup>1</sup> See National Association of Energy Service Companies, [www.naesco.org](http://www.naesco.org).

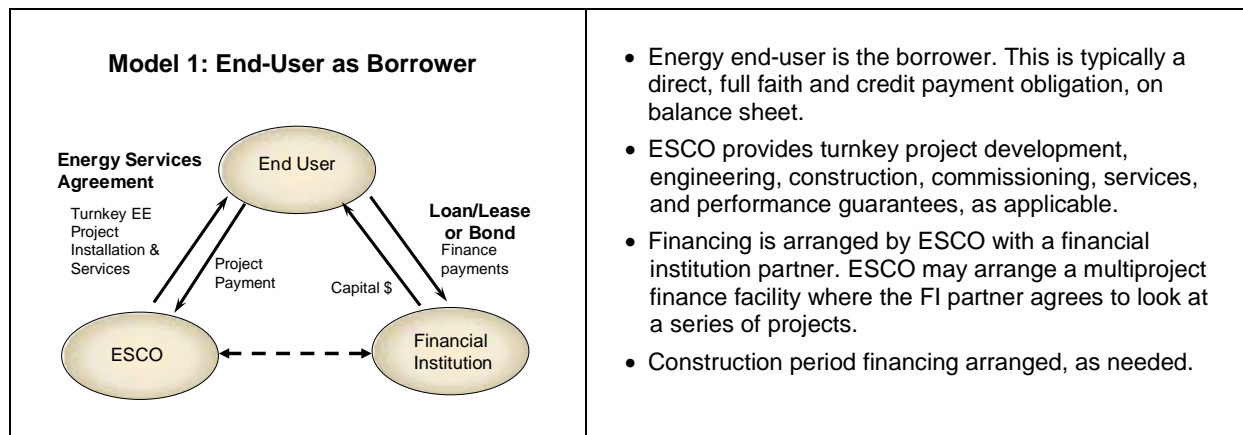
contracting procurement programs (through which ESCOs can be hired) serving state and local government agencies.

Many strong ESCOs exist as subsidiaries of major equipment manufacturers (e.g., Honeywell, Siemens, Johnson Controls) or of utilities. Other ESCOs are independent. State and local governments and private, nonprofit institutions are permitted by law to access tax-exempt bond and lease financing for their projects. As a result, most MUSH market ESCO projects are financed with loans or leases directly to the energy user, with the ESCO providing turnkey project development, installation, services, and performance guarantees.

The ESCO either arranges or provides financing for clean energy projects. When the ESCO arranges the financing, the customer is the borrower of project debt. When the ESCO provides the financing, the ESCO or its financial partner borrows the project debt and incorporates repayment of that debt into the energy service fee pricing. For most ESCOs, finance is a cost center or something they must procure. It is not a profit center because financing is simply a means of facilitating their project sale, which is the basis for their earnings. That is why many ESCOs develop partnerships with financial institutions to provide financing solutions.

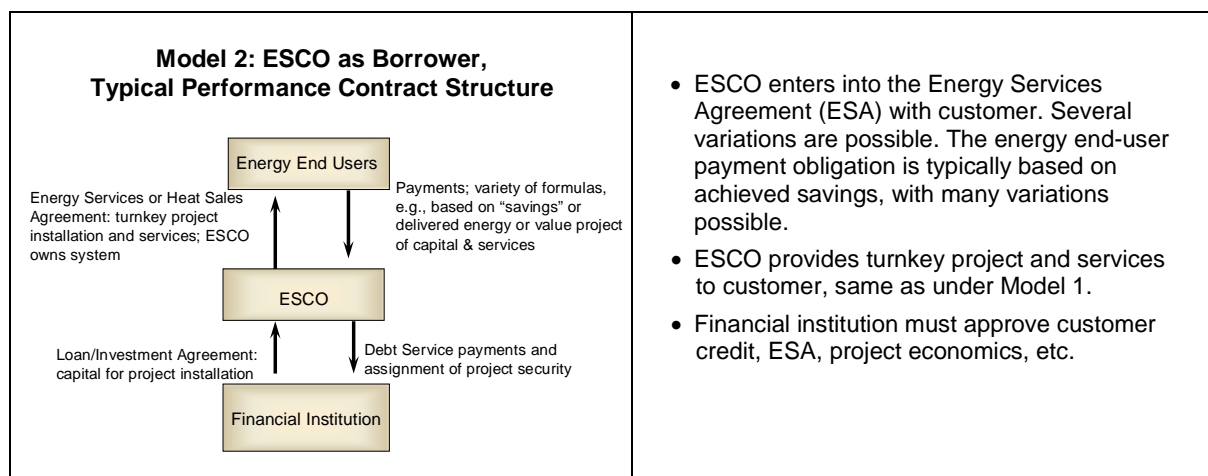
Two basic options are illustrated in the diagrams below.

- **Model Option 1** has the end-user as the borrower of the financing. This may be the best approach for public and nonprofit institutional sector customers who can access tax-exempt financing, e.g., tax-exempt lease purchase or bond financing. Option 1 is also applicable to some commercial properties, but generally is not as attractive in the commercial building sector.



ESCOs can establish programmatic relationships with financial institution partners who want to provide financing to the ESCO's target market (customers). The ESCO markets the financing at the point of sale with the customer, and the financing increases the ESCO's sales. The FI receives a flow of business with relatively lower transaction costs because the ESCO can perform many of the duties related to financing/loan origination.

- **Model Option 2** has the ESCO borrowing the project debt. For the commercial sector, many customers will require an ESCO financing solution, with customer payments treated as an operating expense under a performance contract and payments made from or matched to energy cost savings.



Several challenges are inherent in the Model 2, ESCO as borrower, structure. ESCOs market their services based on an EE project's ability to pay for itself from savings. And performance-based payments are often preferred by customers, as the payments are linked to savings. However, when payments are performance based, they can vary. This uncertainty introduces risk, which makes performance-based transactions more difficult to finance. There is a fundamental tension in EE finance between (a) creating a secure payment structure for financing purposes, and (b) allowing customers to make payments based on actual savings.

Many creative contract methods have been developed to balance these competing interests, such as—

- Combining fixed payment commitments from the customer with extended equipment warranties and/or performance and savings guarantees by the ESCO.
- Defining “savings” based on a one-time verification of project performance, and thereafter, fixing the customer payments based on those “verified savings.”
- Using variable term energy service agreements, where the term is extended as needed until the customer's savings-based payments fully amortize the ESCO's investment.

In lending to the ESCO, the FI is exposed to both (1) end-user credit risk (indirectly, because the ESCOs ability to repay its debt depends on the payment performance of the end-user), and (2) the ESCO's performance. The FI must, therefore, perform analysis and due diligence at both levels, the ESCO and the end-user.

New variations and innovations in performance contracting are continuing to be developed, especially for the large commercial buildings sector. Those options offer 100% financing, tie end-user payments to monitored energy savings, and structure payments so they are treated as an off-balance sheet operating expense of the energy user. For example, Transcend Equity assumes payment of its customers' energy bills and integrates payments for EE investments into the energy bill payments. Metrus Energy finances and owns EE assets and has developed a performance contract method whereby its customers pay based on avoided kWh or unit of energy, like a power purchase agreement, with no up-front capital outlay. Those structures have strong market appeal but are also new and developing at this point. They are typically financed

with private equity sources.<sup>2</sup> They aim to allow the energy user to treat their ESCO payments as an operating expense and not incur a balance sheet debt obligation, so that borrowing capacity is preserved for other purposes.

**Developing ESCO Finance Programs.** Local governments seeking to promote ESCO financing in the commercial sector can partner with ESCOs and with financial institutions that provide financing solutions to ESCOs. Structuring a program requires understanding the business methods and contract structures the ESCO uses, understanding the target market, and performing due diligence on the ESCO and its track record. This information can be collected using a request for proposal (RFP) or request for qualifications (RFQ) process. Grantees can form partnerships with the ESCO directly or with its financial institution partner. The uses of ARRA funds described in Section C below can all be applicable to an ESCO finance program.

### ***Emerging Programs***

- The Chicago Metropolitan Agency for Planning has allocated \$10 million in Energy Efficiency and Conservation Block Grant (EECBG) funds for a large commercial sector program and will be conducting an RFP process, seeking proposals for the use of those funds. ESCOs and their financial partners will be eligible to respond. The RFP will remain flexible for creative responses, covering the range of uses of ARRA funds as discussed in Section C below.
- The Alabama Department of Economic & Community Affairs has allocated \$25 million of State Energy Program (SEP) funds to finance EE and RE retrofits on commercial and industrial real estate throughout Alabama. The program will be available for energy cost-saving projects on existing buildings, which are expected to meet or exceed loan repayments. A request for information (RFI) process to select FI partners, including those partnered with ESCOs, is underway (as of October 2010). The program is administered by Abundant Power Solutions, LLC. Selected FIs will receive an allocation of up to \$2 million in SEP funds to supplement interest rate payments and to “credit enhance” their lending, using the range of structures discussed in Section C below. Loans are expected to range from \$250,000 to \$4 million, with terms of up to 10 years and eligible borrowers ranging from commercial facility owners to ESCOs.

### ***Tax-Exempt Bond Financing for Nonprofit Organizations and Industries***

State-chartered bond authorities exist in every state. They include health care facilities authorities, housing finance agencies, higher education facilities authorities, and industrial development finance authorities. For those authorities, eligible projects include energy efficiency retrofits for existing facilities owned by eligible borrowers. The eligible borrowers for tax-exempt bonds are defined in the federal tax code as:

- Nonprofit healthcare
- Nonprofit higher education
- Nonprofit K-12 schools
- Other nonprofit institutions such as museums and YM/YWCAs
- Low-income multifamily housing

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<sup>2</sup> See <http://metrusenergy.com/> and <http://www.transcended.com/index.asp>

- Industry and manufacturing for defined types of exempt facilities.

Tax-exempt bonds generally offer lower interest rates and longer tenors than most taxable bonds. These characteristics make them well-suited and attractive means of financing EE/RE projects for eligible borrowers. “Tax-exempt” means that the interest component of bond debt service payments is exempt from federal and sometimes state and local income taxes for the bond holder. Therefore, all else being equal with regard to credit quality and term of the bonds, the interest rate will be lower than for a taxable bond. Fixed interest rate bonds with 10 to 15 year terms are common. Tax-exempt bonds also have a deep market of interested bond purchasers. The ability to sell bonds, as always, is subject to the credit quality of the borrower, but credit enhancements supported by ARRA funds can improve the credit quality of the bond.

For these reasons—lower rate, longer term, and deep buyer market—grantees can investigate tax-exempt bonds as a financing alternative when clean energy finance programs target the eligible sectors (listed above). Grantees are advised to hold discussions with their bond authorities to see how they can participate in local or state financing programs. As public entities, bond authorities are generally mission driven and oriented to using their financing capacities for public good purposes. Many authorities also issue taxable bonds and offer other financial products to meet state economic development goals, such as supporting lending to small and medium enterprises. Bond authorities can be a conduit for financing and also a marketing partner; they have existing loan portfolios and can, for example, contact their existing borrowers with an offer of EE/RE engineering assessments and services, if that can be arranged.

Availability of low-cost financing can help drive development of projects, but it needs to be coupled with marketing and project development. There are natural partnerships to be formed between bond authorities and state and local government EE finance programs. Utilities, EE companies and ESCOs, end-user associations (for hospitals, higher education, private schools, and industry), and others can pool their talents to generate project deal flow and market the EE/RE finance products, which the bond authority can arrange.

#### **Private Placements vs. Capital Markets Bond Sales**

Energy efficiency retrofits of existing facilities are often small—between \$75,000 and \$150,000 in many cases. These relatively small loan sizes can be challenging when trying to arrange financing, streamline bond issuance procedures, manage transaction costs, and find interested bond purchasers. In general, bond authorities are conduits to financing, not sources of financing. That is, they issue bonds, but the bond purchasers must still be arranged and the credit of the borrower approved. Bonds can be sold on a private placement basis direct to a bond purchaser without a credit rating, or as a public sale in the capital markets with a credit rating for the bond from a bond rating agency like Fitch or Standard and Poors. The minimum size for a private placement can be anywhere from \$500,000 to \$1 million. Some authorities have developed streamlined procedures for smaller bond issues.

The minimum size for a public bond sale is typically in the range of \$10 million to \$20 million, if not much larger. Credit enhancements or letters of credit can often help to secure a rating from the rating agencies. Some bond authorities can finance projects with their own resources, aggregate them, and then refinance with a bond issue. Or, the bond authorities can work with a partner financing institution that can originate the clean energy loans, which then

### ***Emerging Programs***

- The Colorado Housing Finance Authority has launched a financing program targeting commercial and nonprofit energy users. It not only offers direct loans to borrowers, but also a loan loss reserve to lenders interested in making loans to qualified projects. The program uses ARRA funds provided by the Colorado Governor's Energy Office for the direct loans and the credit enhancement.
- The Washington State Housing Finance Commission is launching a program to offer tax-exempt bond private placement financing of EE/RE projects for nonprofit and multifamily housing borrowers. Marketed in cooperation with a local energy service company, the financing program can support up to \$10 million in project loans. The minimum loan size is \$250,000, and a 10- to 15-year fixed-rate financing in the range of 4%–5.5% is anticipated, subject to borrower credit review. State ARRA funds of \$1 million have been allotted for credit enhancement and program implementation support. The Commission has arranged for a single bond purchaser to approve the credit of borrowers case by case, and streamlined bond documentation has been developed to manage transaction costs.

### **C. Uses for ARRA Funds to Support Large Commercial EE Finance**

States can leverage their funding by using one or more forms of credit enhancement that will decrease risk for lenders and encourage them to lend in markets or for projects in which they have not previously participated. ARRA funds can be used in multiple ways to provide credit enhancement to support financing of commercial sector energy efficiency projects. Leading approaches include loan loss reserve funds, debt service reserve funds, and subordinated co-financing structures, as described below.

#### ***Loan Loss Reserve Funds***

Loan loss reserve funds (LRFs) are funds set aside to cover potential defaults within a loan portfolio. An LRF provides partial risk coverage with the goal of motivating lenders to pioneer new products, broaden access to finance, modify underwriting criteria, increase the size of unsecured loans, extend loan tenors, and lower interest rates. Loan loss reserve funds are well-suited finance programs targeting the single-family residential market. The LRF takes a “portfolio approach” to the credit structure of the loan program. LRFs are useful where the target market consists of a large number of small projects and financial institutions will be making a large number of small loans. The small commercial sector, which requires loans typically up to \$50,000 per loan, can also fit this definition.

LRFs can also be useful as credit enhancements for large commercial sector projects; but because these projects tend to be much larger, there will typically be far fewer transactions in a given portfolio. Each individual transaction will represent a larger portion of the total portfolio. So, the ratio of LRF funds to total EE loan portfolio size needs to be larger to offer risk protection against loan losses. Hence, the leverage ratio of grant dollars to financing supported will be lower. Where the target market has a smaller number of larger loans, as is the case in the large commercial sector, other forms of credit enhancement may be more appropriate than loan loss reserve funds.

#### ***Debt Service Reserve Fund***



With a debt service reserve fund (DSRF), funds are set aside to cover the borrower's failure to pay its regular principal and interest debt service payments. Unlike LRFs in which funds are drawn down when a default and loss occurs, DSRF funds can be drawn when late payments occur. That allows the loan to stay current while the lender works out arrangements with the borrower. When the borrower becomes current on debt service, then the funds can be returned to the DSRF. This structure is appropriate for larger transactions. The funds are typically in the range of 10% of total bond principal, but sometimes are sized to represent 3 to 6 months debt service.

Debt service reserve funds are often associated with a bond issuance. DSRFs can be used to back PACE bonds, Qualified Energy Conservation Bonds (QECBs), tax-exempt bonds, and other long-term bond financings. The borrower benefits from the use of grant funds as a DSRF in terms of lower cost financing and access to financing. The DSRF also enhances the credit structure of the financing, thus increasing access. One disadvantage is that typically a DSRF is capitalized in the bond financing, which adds to the amount the borrower must repay and makes the financing more expensive.

### ***Subordinated Co-Financing***

Subordinated co-financing structures entail two separate loans (senior and subordinated) to cover a project's financing needs. "Subordination" refers to the order of or priority for repayment. The senior lender typically gets paid first and then the subordinated lender. With subordinated co-financing, the ARRA funds are loaned to pay for a portion of the EE project, but the repayment of the ARRA-funded loan is made subordinate to the senior loan. Subordinated debt is typically structured so that it is repaid from project revenues after all project operating costs and senior debt service has been paid. Thus, the subordinated lender assumes greater risk, but still has a claim on project revenues before others who have contributed equity to the project. Subordinated debt provides capital to a project financing structure and is typically in the range of 10% to 25% of a project's sources of funds. Use of subordinated debt can substitute for and reduce the amount of senior debt. That will improve the loan-to-value ratio and the debt service coverage ratio for the senior lender, thereby reducing risk and strengthening the project's financial structure from the senior lender's perspective.

As stated above, the subordinated lender takes on much greater risk than the senior lender—including absorbing all losses up to the total subordinated loan amount. This structure, however, allows the senior lender to put in more capital and charge a lower interest rate than the subordinated lender because the subordinated lender is absorbing most of the risk. Grantees can also provide this subordinated co-financing at a below-market rate to reduce total costs of capital for the project and the energy user.

Subordinated co-financing can also substitute for and reduce the project sponsor's equity requirements. Thus, it has good application for ESCO project finance programs. For many ESCOs, a key limiting factor to project financing is lack of available equity for project investment. Subordinated co-financing can fill that gap, reduce the ESCO's project equity requirement, and allow the project developer to preserve controlling ownership interests in its project or company.

U.S. Department of Energy (DOE) regulations permit state and local governments to use ARRA funds as subordinated co-financing. For example, the State of Washington is using ARRA SEP funds in this manner. Alabama is also considering this structure for its large commercial sector program. Other state clean energy funds offer subordinated debt financing to support renewable

energy investments. For instance, the Vermont Clean Energy Development Fund and the Delaware Sustainable Energy Utility use subordinated debt financing alongside other options.

## **D. ARRA Guidelines and Compliance Responsibilities**

Parties implementing large commercial sector EE/RE projects supported by ARRA funds will need to comply with certain ARRA and DOE guidelines. They concern the reporting of energy savings, emissions reductions, and job creation associated with the projects, the use of approved methodologies, and compliance with applicable federal legislation, including the—

- Davis-Bacon Act, the prevailing wage law
- National Environmental Policy Act (NEPA) requirements, unless a categorical exemption has been obtained
- National Historic Preservation Act of 1966, unless an exemption has been obtained under a programmatic agreement
- The Recovery Act, which reiterates other relevant federal legislation.<sup>3</sup>

Compliance with the guidelines mentioned above is being readily accepted by some commercial sector contractors, particularly those already paying prevailing wages, but is a point of concern for others due to resulting increases in project costs. An in-depth discussion of the compliance requirements will be included in a forthcoming chapter of this Guide.

## **E. Conclusion**

The large commercial buildings sector offers tremendous energy savings, emissions reductions, and economic investment potential. It is, therefore, a worthy target for government-supported clean energy finance programs. The EE/RE industry is looking for financing solutions to unlock this value, and use of ARRA funds can be instrumental in demonstrating new and scalable financing mechanisms. Financing practices are rapidly developing in this sector and will be included in future updates of this Clean Energy Finance Guide.

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<sup>3</sup> A full list of ARRA guidelines can be found at <http://www1.eere.energy.gov/recovery/>.